



Empowering Sustainable Grain Processing for Food Security

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Abstract. An initiative to improve sustainable grain processing in flour mill products to support food security is described in this article. The well being of rural populations, many of whom depend on agriculture for their livelihoods, depends heavily on the availability of a reliable and nourishing food supply. flour mill products can help achieve long-term food security goals and reduce their environmental impact by implementing energy-efficient processes, cutting waste, and maximizing resource use. An initiative to create awareness among the people about customer services about the machinery and identifying the problems what they are facing and providing solutions to solve the issues. This article emphasizes the significance of such initiatives in attaining sustainable development and guaranteeing trustworthy access to basic food supplies.

Keywords: Key words: Energy- efficient processes, maximizing resource use, food supplies.

1 Introduction:

The issues of food security and sustainable development are particularly prominent in rural areas of the world. The wellbeing of rural populations, many of whom depend on agriculture for their livelihoods, depends heavily on the availability of a reliable and nourishing food supply. Grain processing is greatly influenced by flour mill products, which are frequently important in these areas. In this setting, strengthening sustainable grain processing techniques within rural flour mill products not only becomes necessary but also serves as a catalyst for enhancing regional food security and creating environmental resilience. The main purpose is to create awareness among the people who belongs to rural areas about flour machines and identifying the problems what they are facing and providing suggestions to them.

The main aim of the project is to empowering the food security with usage of flour mill products in rural areas and collecting the data through samples and identifying the problems faced by the people and providing useful suggestions and solutions to them

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flour mill products, often the linchpins of these rural communities, possess the potential to transform the food security landscape. By embracing sustainable grain processing practices, these mills can play a pivotal role in not only feeding local populations but also safeguarding the environment and bolstering economic growth. To bring awareness among the people who were already using flour machines and who are willing to start a small business with these kind of services about the machineries and what are the benefits they have to get by the respected company and regular services and bringing change in advertising strategies to increase and bring growth of the business .and the main aspect is to provide customer satisfaction.

2 Review of Literature

According to [7] the Food safety and security at present major issues worldwide with over a million people. His study reveals, due to lack of sufficient dietary energy access while others suffer from micronutrient deficiencies. This paper explores the factors that influence consumer food preferences and habits, hence exposing them in to food insecurity. It draws on primary data, livelihood surveys and documented socioeconomic activities that combine to create a range of different household livelihood outcomes. Hence the regular and repeated household monitoring would enable top tracking the food safety and security indicators such as to monitor household and community characteristics and evaluate policy impacts and project interventions across communities.

According to [5], the traditional behaviour of the purchases has become an inadequate for some of the individuals due to the technological innovations. Nowadays people are preferring the simplest way of behaviours for acquiring the new brands and reaching the stores in which was the internet has greatly infused that the consumers' ideas on the price, speed and capacity. In this consequence, a new approach was founded by the vendors to create value for customers and build relationships with them.

According to [2] in the recent years, the growth in the developing countries have been continuously increasing than in the industrialized countries, which indicates that this growth was potentially important implications for the world food demand as well as the world agriculture sector. It seems to be a carter of rising pressure on the world food prices which was considerable to be as the result of the convergence that increased the development of food source by less than demand.

The ongoing COVID-19 pandemic situation was resulted in a new age in the efficiency of the food supply chain, however the implications for a mankind, the economy, and the food industry are still being investigated by this sector. Food safety security systems that is directly impacted to common customer buying behavior [1]. This overview reviews that the food safety and security during diseases and pandemics before going on to the present crises' panic purchasing, food shortages, and price spikes. The relevance of food resilience, as well as the necessity to the address issues of food loss and waste, is emphasized in the review of food safety and security and sustainable development.

According to [10], the online food delivery sector had been developing at high rates throughout globally and specially during the pandemic situation. When most of the countries are imposed lockdown due to the huge impact of COVID-19 all of the stores where forced to close their shops unless they have choose the online delivery service. Therefore, most of the restaurants are started to the enhancing their relationship and making deals with the food delivery companies such as —Online channels in order to insure the flow of their products. This study mainly focusing on creating the awareness and knowledge regarding food safety and security.

3 Methodology:

Data is collected from primary and secondary sources. Collected data from 100 owners of flour mills. Prepared a questionnaire and made a survey in rural areas regarding their business and what kind of problems they face in their routine business. Identified specific challenges faced by the flour mill owners and the customers in the locality. Gathered data were analyzed as to how sustainable practices affect the availability of food and the efficiency of grain processing. Survey method has been adopted for the study to collect the required data from the flour mill owners in the select region.

This study has been taken up to look in to the unexplored areas of problems and prospects regarding grain production the select region. Though abundant quantum of business and activities take place, a very little effort has been made to study on flour mill products market comprehensively. Besides, information on this product or the industry is not well published and easily available. A research work is required to measure the issues pertaining to customer satisfaction among the owners of flour mill products.

3.1 Objectives of the study

- To study the present consumer scenario of flour mill products and food safety
- To examine the awareness and consumers' opinions on flour mill products.
- To know the respondents' preferences and reasons for buying mills.

4 Data Analysis

Gender distribution of the respondents show 52 male owners, accounting for 52% and the rest being females. The flour mill product brands covered in the present study included the local popular brands such as Janta Atta Chakki, MV Agro, Sujatha, Rajratna, Lakshmi Flour Mills and others. Regarding source of awareness about flour mill products, 34% of awareness is attributed to newspaper advertisement, followed by 30% generated through word of mouth, while 20% of awareness emanating from local TV channel advertising. The next important question is why people buy flour mill products when renowned branded products are available in the market. Significant majority of over 60% buy as they are available at affordable prices. Other factors include product

innovation (20%), good services (12%), and to contribute to the livelihood of small entrepreneurs.

5 Findings

The brand ownership pattern revealed that 30% of the respondents surveyed in the select area were found having flour mill products duration of buying mills was concerned, 10% of the total owners were found to have purchased this product within three to five years. 34% owners had bought flour mill equipment in six to ten years. Newspaper advertising had emerged as a dominant source of awareness that influenced the purchase of flour brand with 88%. It was followed by television advertising 97% and friends' advice 65%.

Considering the degree of satisfaction on some attributes, the study revealed that 88% owners of flour mill equipment were satisfied with the after sales services, followed by easy availability 72%, smooth functioning 62% by and durability. On customers' expectations on flour mill equipment, 30% stated that more technical features should be added. 28% stated that new models should be developed for small families. On degree of satisfaction on flour mill products, overall, 93% owners were satisfied, out of which, 37% were moderately satisfied, 31% satisfied and 25% found extremely satisfied.

Improper storage facilities, Lack of technical knowledge to operate some machineries, lack of power supply in their locality, Improper advertisement strategies and techniques, Lack of services to the machineries by the company Regular Machinery breakdowns and Repairs, Noise pollution, People expecting some assistance by the government

6 Suggestions

The competitive scenario in this market is on rise. It is likely to erode the market share of flour mill products. Hence, new strategies need to be designed and implemented. Though mill are enjoying the patronage of its owners for many years, still, there is a need to attract new customers for further expansion. Looking to a very high exposure of television advertising, this brand should be more highlighted through this media. There is a need to address good look and style and technological excellence as these factors are also equally important to stay in the market.

More technical features need to be added. Colour preferences of customers are required to be studied and incorporated with respect to laminated sheets. Promotion should be on wider scale. For small families, new models are to be developed. Providing better power supply in the rural areas and creating awareness about the machinery usage among the people.

Developing advertisement strategies and make companies to provide better services. Customer support from the machinery manufacturing companies and make people to

invest on good manufacturing companies to avoid breakdowns and repairs. Instruct the users to keep in regular maintenance and developing grain storage facilities through rental God owns to maintaining good quality of grains.

7 Conclusion:

This community requires several innovations and improvement strategies to increase the sustainability, productivity, and quality of flour products. In order to suggest technical solutions and significant amelioration for farmers, food producers. Considering the effectiveness of the suggested improvement strategies in reducing the environmental pressures. Beyond just ensuring food security, empowering sustainable grain processing in rural flour mill products also promotes economic growth, social cohesion, and environmental responsibility. The transition of rural flour mill products into change agents shows the confluence of creativity, resilience, and shared responsibility as we move toward a future characterized by complex difficulties. This voyage is in line with the underlying idea that promoting sustainable practices where they are most needed is essential to the survival of both communities and the world. The government has to take initiative in this aspect to develop rural areas and it will bring economic growth.

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